

GENERIC · BODY

B0020

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0020

Passenger Frontal Stage 1 Deployment Control Circuit

B0020 indicates that the restraint control module (RCM) has detected a fault in the passenger frontal stage 1 deployment control circuit, which is the primary airbag inflator circuit for the front passenger seat. The module monitors the circuit's resistance and continuity and sets this code when the readings fall outside the expected range, which can prevent the passenger airbag from deploying in a crash.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Airbag warning light illuminated on the instrument cluster
- Passenger airbag status indicator may show 'off' or 'disabled' even with an occupant present
- Often no symptoms besides the warning light
- Passenger airbag may not deploy in a frontal collision
- In some vehicles, a chime or message reminding you to service the restraint system
- Remote start or other convenience features may be disabled as a safety precaution

Common causes, most likely first

- 1 Faulty passenger frontal airbag module (stage 1 inflator) with an open or shorted squib
- 2 Damaged or corroded wiring harness or connector at the passenger airbag or under the seat
- 3 Poor electrical connection at the RCM or passenger airbag connector
- 4 Water intrusion or corrosion in the passenger compartment affecting the airbag circuit
- 5 Failed restraint control module (RCM) or internal driver circuit
- 6 Aftermarket accessories or previous repairs that disturbed the airbag wiring
- 7 Seat occupancy sensor system fault that indirectly affects the deployment circuit



How to diagnose and fix it

- 1 Connect a scan tool and record all restraint system codes, then clear codes and recheck to see if B0020 returns immediately
- 2 Inspect the passenger airbag connector and the RCM connector for corrosion, loose pins, or damage, and clean or repair as needed
- 3 Perform a resistance measurement on the stage 1 deployment circuit at the RCM connector with the airbag disconnected, comparing to the manufacturer's specification
- 4 Check the wiring harness for chafing, pinches, or breaks along the route from the RCM to the passenger airbag, especially near seat tracks and trim panels
- 5 If the circuit tests good, substitute a known-good passenger airbag module only if the manufacturer's procedure allows, and recheck for the code
- 6 If the code persists with a known-good airbag and verified wiring, diagnose or replace the RCM following the factory service procedure
- 7 After repair, clear codes and verify the airbag warning light operates correctly and no codes return

What the passenger airbag code really means

- A common misdiagnosis is replacing the passenger airbag when the actual fault is a corroded connector under the seat or at the RCM, so always inspect connectors before condemning the module.
- The RCM may set B0020 if the passenger airbag is disabled by a manual on/off switch or by the occupant classification system, so check the airbag status indicator and switch position first.
- Aftermarket seat covers, phone chargers, or wiring for accessories routed near the passenger seat can disturb the airbag circuit and trigger this code.
- Low battery voltage or a recent battery replacement can cause a temporary B0020 that clears after the system self-checks, so verify the battery and charging system before deep diagnosis.
- B0020 does not always mean the airbag will fail to deploy; it may indicate a circuit that is out of specification but still functional, yet the system disables deployment as a precaution.

Can I keep driving with B0020?

The vehicle is safe to drive, but the passenger frontal airbag may not deploy in a crash, so avoid carrying passengers in the front seat until the fault is repaired. Have the restraint system diagnosed promptly and do not attempt to repair airbag circuits without proper training and tools.

Tools that help

- OBD-II scan tool with restraint system capability
- Digital multimeter with low-ohm resistance measurement
- Manufacturer service information for circuit specifications and procedures
- Terminal removal tools and electrical contact cleaner
- Safety glasses and insulated gloves



Reading B0020

- B** Body: airbags, seats, doors, lights and comfort systems.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Airbags, seats, doors, lights and comfort systems.
- 20** The exact fault within that area.

Often seen with

B0019 Right Front/Passenger Frontal Deployment Loop Resistance Low · **B0021** Left Side Deployment Stage 1 Control · **B0022** Left Side Deployment Stage 1 Loop Open · **B0023** Left Side Deployment Stage 1 Loop Short to Ground · **B0024** Right Side Deployment Control

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0020/>

